AUSTRALIAN MATHEMATICS COMPETITION
WARM-UP PAPER
JUNIOR 8
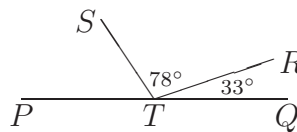
Questions 1 - 4, 3 marks each

1. 0.3×2 equals

   (A) 0.15　　　　(B) 0.06　　　　(C) 0.6　　　　(D) 0.32　　　　(E) 0.9

2. PQ is a straight line.

   The size of angle STP, in degrees, is

   (A) 249　　　　(B) 101　　　　(C) 111　　　　(D) 69　　　　(E) 89

3. The average of the numbers 0.1, 0.11, and 0.111 is

   (A) 0.041　　　　(B) 0.107　　　　(C) 0.11　　　　(D) 0.1111　　　　(E) 0.17

4. A bus leaves Manjimup at 11:36 am and arrives in Jerramungup at 2:23 pm on the same day. The time for the journey is

   (A) 4 hours 47 mins　　　　(B) 2 hours 47 mins　　　　(C) 9 hours 13 mins
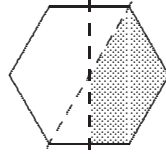
   (D) 1 hour 27 mins　　　　(E) 3 hours 13 mins

Questions 5 - 8, 4 marks each

5. Which of the following numbers is the smallest?

   (A) $\dfrac{1}{4}$　　　　(B) $\dfrac{2}{5}$　　　　(C) $\dfrac{2}{7}$　　　　(D) $\dfrac{3}{10}$　　　　(E) $\dfrac{3}{11}$

6. Each of the dashed lines drawn on this regular hexagon is an axis of symmetry.

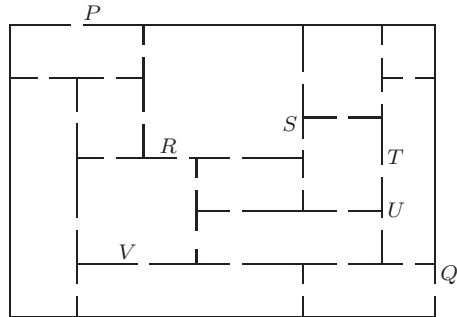The fraction of the hexagon which is shaded is

(A) $\dfrac{5}{12}$ (B) $\dfrac{7}{24}$ (C) $\dfrac{11}{24}$ (D) $\dfrac{1}{3}$ (E) $\dfrac{3}{8}$

7. There is a total of 150 coins in two boxes. Seventeen coins are then shifted from the first box to the second, resulting in the second box having twice the number of coins as the first. The number of coins in the first box before the shift was

(A) 87   (B) 75   (C) 50   (D) 67   (E) 70

8. My favourite muesli bars are packed in boxes of 8, and the contents of each box weigh 250 grams. The information on the box states that each bar contains 3.5 grams of fat. The percentage of fat in the muesli bars is

(A) 1.4   (B) 7   (C) 11.2   (D) 14   (E) 28

Questions 9 - 10, 5 marks each

9. On my car, a particular brand of tyre lasts 40 000 kilometres on a front wheel or 60 000 kilometres on a rear wheel. By interchanging the front and rear tyres, the greatest distance, in kilometres, I can get from a set of four of these tyres is

(A) 52 000   (B) 50 000   (C) 48 000   (D) 40 000   (E) 44 000

10. A group of students visited a museum. They entered through doorway P and departed through doorway Q. In between, they passed through each doorway once and only once, except for one doorway, which they did not pass through.

The doorway they did not pass through was

(A) R (B) S (C) T (D) U (E) V